Lloyd's Register

Rules and Regulations for the Classification of Special Service Craft, July 2012

Notice No. 3

Effective Date of Latest Amendments:

See page 1

Issue date: November 2012

RULES AND REGULATIONS FOR THE CLASSIFICATION OF SPECIAL SERVICE CRAFT, *July 2012*

Notice No. 3

This Notice contains amendments within the following Sections of the *Rules and Regulations for the Classification of Special Service Craft, July 2012*. The amendments are effective on the dates shown:

Part	***Chapter***	***Section***	***Effective date***
1	2	3	1 January 2013
1	3	11	1 January 2013
1	4	10	1 January 2013
14	1	1, 6	1 January 2013
14	1	7	Corrigendum
15	2	6	1 January 2013
16	1	4	1 January 2013

It will be noted that the amendments also include corrigenda, which are effective from the date of this Notice.

The *Rules and Regulations for the Classification of Special Service Craft, July 2012* are to be read in conjunction with this Notice No. 3. The status of the Rules is now:

Rules for Special Service Craft	Effective date:	July 2012
Notice No. 1	Effective date:	1 October 2012
Notice No. 2	Effective date:	1 January 2013 & Corrigenda
Notice No. 3	Effective date:	1 January 2013 & Corrigendum

Part 1, Chapter 2
Classification Regulations

Effective date 1 January 2013

■ *Section 3*
Character of classification and class notations

3.12 Descriptive notes

3.12.2 ~~The descriptive note **SCM** (Screwshaft Condition Monitoring) may be assigned when oil lubricated screwshaft arrangements with approved oil glands are fitted and the requirements of Ch 3,11.3 or Ch 4,10.3 are complied with.~~

3.12.2 Screwshaft Condition Monitoring.

SCM Screwshaft Condition Monitoring.
This descriptive note will be assigned where an Owner adopts the requirements for monitoring of the screwshaft. The descriptive note will indicate that equipment and procedures are in place to determine the physical and operational condition of that equipment.

Part 1, Chapter 3
Periodical Survey Regulations for Service Craft

Effective date 1 January 2013

■ *Section 11*
Screwshafts, tube shafts, propellers and water jet units

11.3 Screwshaft Condition Monitoring (SCM)

Existing paragraphs 11.3.1 *to* 11.3.3 *have been deleted.*

11.3.1 Where oil lubricated shafts with approved oil glands are fitted or where water lubricated sternbush bearings are fitted, and the Owner has complied with the requirements of 11.3.2 or 11.3.3, the ShipRight descriptive note **SCM** (Screwshaft Condition Monitoring) may be entered in column 6 of the *Register Book*.

11.3.2 Oil lubricated bearings:

(a) Lubricating oil analysis to be carried out regularly at intervals not exceeding six months. The lubricating oil analysis documentation is to be available on board. Each analysis is to include the following minimum parameters:
- water content,
- chloride content,
- bearing material and metal particles content,
- oil ageing (resistance to oxidation).

(b) Oil samples are to be taken under service conditions and are to be representative of the oil within the sterntube.

(c) Oil consumption is to be recorded.

(d) Bearing temperatures are to be recorded (two temperature sensors or other approved arrangements are to be provided).

(e) Facilities are to be provided for measurement of bearing weardown.

(f) Oil glands are to be capable of being replaced without withdrawal of the screwshaft.

11.3.3 Water lubricated bearings:

(a) A means of monitoring and recording variations in the flow rate of lubricating water using two independent sensors is to be provided.

(b) A means of monitoring and recording variation in the shaft power transmission is to be provided.

(c) A maximum permitted weardown of the sternbush is to be submitted and approved wear monitoring equipment is to be fitted. The weardown allowance is to include both the absolute maximum allowable weardown and the weardown at which it is recommended to carry out an inspection and maintenance. An alignment analysis considering both the newly installed clearance and the proposed absolute maximum allowable weardown, demonstrating that the system will operate satisfactorily within these two limits, is to be submitted and approved.

(d) For open loop systems the manufacturer is to submit information regarding the required standard of lubricating water filtration and lubricating water filters or separators are to be fitted which are able to achieve this requirement:
- The lubricating water supply is to be fitted with continuous water sediment measuring or turbidity monitoring equipment. The results are to be recorded and retained on board and made available to LR on request; alternatively
- There is to be a LR approved extractive sampling and testing procedure with the records held on board and made available to LR on request.

Records of cleaning and replacement of lubrication filters/separators are to be maintained on board. The pumping and water filtration system is to be considered part of the continuous survey cycle and is to be subject to a Periodical Survey.

(e) Where a closed cycle water system is used, the pumping and water filtration systems are to be considered part of the continuous survey cycle and are to be subject to a Periodical Survey. Water analysis is to be carried out regularly at intervals not exceeding six months. Samples are to be taken under service conditions and are to be representative of the water circulating within the sterntube. Analysis results are to be retained on board and made available to LR on request. The analysis is to include the following parameters:
  (i) Chloride content.
  (ii) Bearing material and metal particles content.

(f) The shaft is to either be constructed of corrosion resistant material or protected with a corrosion resistant protective liner or coating approved by LR. Where a protective liner or coating is used this is to meet the requirements of Pt 11, Ch 2,4.14, and a means of assessing the condition of this liner is to be submitted and approved.

(g) Glands are to be capable of being replaced without withdrawal of the screwshaft.

(h) There is to be a shaft starting/clutch engagement block to inhibit starting the shaft until lubricating water flow has been established. This is to only act as a starting block; low lubricating water flow after shaft start is to be alarm only with no shut-down.

(j) Alternative arrangements are subject to special consideration.

The means of monitoring and recording lubricating water flow and shaft power variation are to be submitted for approval.

11.3.4 For maintenance of the descriptive note **SCM**, the records of all data collected in 11.3.2 and 11.3.3 are to be retained on board and audited by LR annually.

11.3.5 Where the requirements for the descriptive note **SCM** have been complied with, the screwshaft need not be withdrawn at surveys as required by 11.2.1, provided all condition monitoring data are found to be within permissible limits and all exposed areas of the shaft are examined by a magnetic particle crack detection method or an alternative approved means for shafts with a protective liner or coating (11.3.3(f)). The remaining requirements of 11.2.1 are to be complied with. Where the attending Surveyor considers that the data presented is not sufficient to determine the condition of the shaft, the shaft may be required to be withdrawn in accordance with 11.2.1. For water lubricated bearings, the screwshaft is to be withdrawn for examination, as 11.2.1, when the ship reaches 18 years from the date of build or the third Special Survey, whichever comes first.

Part 1, Chapter 4
Periodical Survey Regulations for Yachts

Effective date 1 January 2013

■ *Section 10*
Screwshafts, tube shafts, propellers and water jet units

10.3 Screwshaft Condition Monitoring (SCM)

Existing paragraphs 10.3.1 *to* 10.3.3 *have been deleted.*

10.3.1 Where oil lubricated shafts with approved oil glands are fitted or where approved water lubricated sternbush bearings are fitted, and the Owner has complied with the requirements of 10.3.2 or 10.3.3, the ShipRight descriptive note **SCM** (Screwshaft Condition Monitoring) may be entered in column 6 of the *Register Book*.

10.3.2 Oil lubricated bearings:

(a) Lubricating oil analysis to be carried out regularly at intervals not exceeding six months. The lubricating oil analysis documentation is to be available on board. Each analysis is to include the following minimum parameters:
  - water content,
  - chloride content,
  - bearing material and metal particles content,
  - oil ageing (resistance to oxidation).

(b) Oil samples are to be taken under service conditions and are to be representative of the oil within the sterntube.

(c) Oil consumption is to be recorded.

(d) Bearing temperatures are to be recorded (two temperature sensors or other approved arrangements are to be provided).

(e) Facilities are to be provided for measurement of bearing weardown.

(f) Oil glands are to be capable of being replaced without withdrawal of the screwshaft.

10.3.3 Water lubricated bearings:

(a) A means of monitoring and recording variations in the flow rate of lubricating water using two independent sensors is to be provided.

(b) A means of monitoring and recording variation in the shaft power transmission is to be provided.

(c) A maximum permitted weardown of the sternbush is to be submitted and approved wear monitoring equipment is to be fitted. The weardown allowance is to include both the absolute maximum allowable wear down and the weardown at which it is recommended to carry out an inspection and maintenance. An alignment analysis considering both the newly installed clearance and the proposed absolute maximum allowable weardown, demonstrating that the system will operate satisfactorily within these two limits, is to be submitted and approved.

(d) For open loop systems the manufacturer is to submit information regarding the required standard of lubricating water filtration and lubricating water filters or separators are to be fitted which are able to achieve this requirement:
- The lubricating water supply is to be fitted with continuous water sediment measuring or turbidity monitoring equipment with the results being recorded and retained on board and made available to LR on request; alternatively
- There is to be a LR approved extractive sampling and testing procedure with the records held on board and made available to LR on request.

Records of cleaning and replacement of lubrication filters/separators are to be maintained on board. The pumping and water filtration system is to be considered part of the continuous survey cycle and is to be subject to a Periodical Survey.

(e) Where a closed cycle water system is used, the pumping and water filtration systems are to be considered part of the continuous survey cycle and are to be subject to a Periodical Survey. Water analysis is to be carried out regularly at intervals not exceeding six months. Samples are to be taken under service conditions and are to be representative of the water circulating within the sterntube. Analysis results are to be retained on board and made available to LR on request. The analysis is to include the following parameters:
(i) Chloride content;
(ii) Bearing material and metal particles content.

(f) The shaft is either to be constructed of corrosion resistant material or protected with an approved corrosion resistant protective liner or coating. Where a protective liner or coating is used, this shall meet the requirements of Pt 11, Ch 2,4.14, and a means of assessing the condition of this liner is to be submitted and approved.

(g) Glands are to be capable of being replaced without withdrawal of the screwshaft.

(h) There is to be a shaft starting/clutch engagement block to inhibit starting the shaft until lubricating water flow has been established. This is to only act as a starting block; low lubricating water flow after shaft start is to be alarm only with no shut-down.

(j) Alternative arrangements are subject to special consideration.

The means of monitoring and recording lubricating water flow and shaft power variation are to be submitted for approval.

10.3.4 For maintenance of the descriptive note **SCM** the records of all data collected in 10.3.2 and 10.3.3 are to be retained on board and audited by LR annually.

10.3.5 Where the requirements for the descriptive note **SCM** have been complied with, the screwshaft need not be withdrawn at surveys as required by 10.2.1 provided all condition monitoring data is found to be within permissible limits and all exposed areas of the shaft are examined by a magnetic particle crack detection method or an alternative approved means for shafts with a protective liner (10.3.3(f)). The remaining requirements of 10.2.1 are to be complied with. Where the attending Surveyor considers that the data presented is not sufficient to determine the condition of the shaft, the shaft may be required to be withdrawn in accordance with 10.2.1. For water lubricated bearings, the screwshaft is to be withdrawn for examination, as 10.2.1, when the ship reaches 18 years from the date of build or the third Special Survey, whichever comes first.

Part 14, Chapter 1
Steering Systems

Effective date 1 January 2013

■ *Section 1*
General requirements

1.3 Definitions

1.3.6 **Power actuating system** means the hydraulic equipment provided for supplying power to turn the rudder stock, comprising a steering power system or systems, together with the associated pipes and fittings, and a rudder actuator. The power actuating systems may share common mechanical components, i.e., tiller quadrant and rudder stock, or components serving the same purpose.

■ *Section 6*
Control, monitoring and electrical equipment

6.3 Electrical equipment

6.3.2 Where steering motor circuits are supplied by converters, consideration will be given to arrangements that provide an equivalent level of safety, reliability, availability and indication to those specified in 6.3.1, provided that technical justification is submitted.

Existing paragraphs 6.3.2 *to* 6.3.10 *have been renumbered* 6.3.3 *to* 6.3.11.

CORRIGENDUM

■ *Section 7*
Requirements for craft which are not required to comply with the HSC Code

7.2 Design and performance

7.2.8 Where manually operated steering is permitted, *see* 7.2.2, the effort required to operate the tiller or steering wheel is to be not more than 160 N under normal conditions.

Part 15, Chapter 2
Hull Piping Systems

Effective date 1 January 2013

■ *Section 6*
Emergency bilge drainage

6.1 Emergency bilge drainage

6.1.4 Where **UMS** (Unattended Machinery Space) notation is to be assigned, the requirements of Pt 16, Ch 1,4.6.2 are not applicable for valves serving an emergency bilge system, provided that:

(a) the emergency bilge valve is normally maintained in a closed position;

(b) a non-return device is installed in the emergency bilge piping; and

(c) the emergency bilge suction piping is located inboard of a shell valve that is fitted with the control arrangements complying with Pt 16, Ch 1,4.6.2.

Part 16, Chapter 1
Control Engineering Systems

Effective date 1 January 2013

■ *Section 4*
Unattended machinery space(s) – UMS notation

4.6 Bilge level detection

4.6.2 Local or remote controls of any valve within the space serving a sea inlet, a discharge below the waterline, a bilge injection or a direct bilge system, should be so sited as to be readily accessible and to allow adequate time for operation in case of influx of water to the space, having regard to the time which could be taken to reach and operate such controls, *see also* 2.7 and Pt 15, Ch 2,2 and Ch 2,4.

Section numbering in brackets reflects any Section renumbering necessitated by any of the Notices that update the current version of the Rules for Special Service Craft.

Part 10, Chapter 1

13.6.1	Pt 16, Ch 1,2.12.2 and 2.12.7 *now reads* Pt 16, Ch 1,2.13.2 and 2.13.7

Part 14, Chapter 1

7.2.2	7.2.6 *now reads* 7.2.8
Table 1.6.1	6.3.2 *now reads* 6.3.3
	6.3.3 *now reads* 6.3.4
	6.3.4 *now reads* 6.3.5
7.3.2	6.3.5 *now reads* 6.3.6

Part 16, Chapter 2

1.2.12	17.3.11 and 17.3.12 *now reads* 17.3.9 and 17.3.10

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